IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

REDACTED PUBLIC VERSION

POWER INTEGRATIONS, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 04-1371-JJF
	)	
FAIRCHILD SEMICONDUCTOR INTERNATIONAL, INC., and FAIRCHILD SEMICONDUCTOR CORPORATION,	)	
	)	
Defendants.	)	

OPENING BRIEF IN SUPPORT OF DEFENDANTS' MOTION FOR SUMMARY JUDGMENT OF INVALIDITY OF CLAIM 1 OF THE '876 PATENT

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I. INTRODUCTION.

Claim 1 of the '876 patent claims a simple circuit aimed at reducing electromagnetic radiation in a power supply by varying the switching frequency. The technique of Claim 1 has been known and described in patents and articles since at least the mid-1980s, well over 10 years before the '876 patent was filed in the fall of 1998. In fact, each and every element of Claim 1 was disclosed expressly in the Martin patent, filed August 16, 1985. Each and every element of Claim 1 was also disclosed in each of two articles published in trade journals in 1991. The existence or content of this clear and convincing prior art evidence is not in dispute and Fairchild is entitled to summary judgment.

II. BACKGROUND.

A. Use Of Frequency Variation Techniques To Reduce EMI In Power Supplies Was Known By The Mid-1980s.

Cell phones, computers, televisions, and other familiar electronic devices all plug into the wall to get power or charge their batteries. Unfortunately, wall power is unsuited for such electronic devices. Thus, power supplies (also referred to as switching power converters) are used to convert the powerline voltage from the wall (110 volts, 60 hertz alternating current in the United States) into a form that is useful for powering electronic devices.

Switching power converters suffer from several drawbacks, one of which is that they generate electrical noise known as electromagnetic radiation ("EMI"). This problem has been recognized for years and a variety of solutions have long been used to reduce EMI, such as filtering and shielding. Another method developed nearly 20 years ago involves the use of frequency control to reduce peak EMI by varying the switching frequency of the converter. Frequency variation causes the large amount of EMI energy that would have been generated at one particular frequency to be spread out over a range of frequencies, thus reducing the peak emission at any given frequency. For example, if a switching regulator operates at 1 MHz, most of its EMI is generated at 1 MHz. But if the switching regulator runs at .9 MHz half the time and 1.1 MHz half the time, the EMI generated at each of these frequencies will be reduced by

approximately half. This method of reducing EMI is referred to as a spread spectrum technique.

A circuit using spread spectrum techniques to reduce EMI in a power supply was disclosed in U.S. Pat. No. 4,638,417 (the "Martin patent"), which issued 19 years ago, on January 20, 1987. Exh. A, 1:55-58; *see also id.*, 1:6-10, 3:11-33.[1] The Martin patent describes "a circuit which reduces electromagnetic interference (EMI) by frequency modulation of power converters." *Id.*, 1:66-68. The circuit disclosed in Martin uses a counter to cause a digital to analog converter to vary the control input of a voltage controlled oscillator. The counter, which is clocked by the voltage controlled oscillator, is coupled to the digital to analog converter through an EPROM. As the counter increments, the output of the counter is used to look up digitized signal voltages stored in the EPROM. The digital to analog converter converts those digitized signal voltages to analog signals which are then provided to the control input of the oscillator and used to vary the frequency of the output signal of the oscillator.

Similar circuits for reducing EMI using spread spectrum techniques were subsequently described in two articles published in 1991 in the IEEE Transactions on Power Electronics. *See* Exh. B, Wang, Andrew and Sanders, Seth, "Programmed Pulsewidth Modulated Waveforms for Electromagnetic Interference Mitigation in DC-DC Converters", *IEEE Transactions on Power Electronics*, Vol. 8, No. 4, October 1993 (the "Wang reference"); Exh. C, Thomas G. Habetler, "Acoustic Noise Reduction in Sinusoidal PWM Drives Using a Randomly Modulated Carrier," *IEEE Transactions on Power Electronics*, Vol. 6, No. 3, July 1991, p. 356 (the "Habetler reference"). Both the Wang and Habetler references describe the use of an oscillator to clock a counter, the output of which is coupled (via a ROM) to a digital to analog converter. The output of the digital to analog converter in turn drives the oscillator's control input to vary the frequency of the oscillator. Thus, by 1991, reducing EMI by varying the switching frequency of the power supply was well known by those of ordinary skill in the art.

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[1] For the convenience of the Court, Fairchild has highlighted the relevant passages of certain exhibits in yellow. In all such cases, the highlighting has been added by Fairchild and is not part of the original exhibit.

B. <u>Power Integrations' '876 Patent On Techniques For Reducing EMI By Varying The Switching Frequency Of A Power Supply Was Not Filed Until 1998.</u>

Power Integrations' United States Patent No. 6,249,876 (the "'876 patent"), filed on November 16, 1998, also describes a circuit for implementing frequency variation in a power supply to reduce EMI. Exh. E. Despite the fact that such techniques were commonly known in the industry, during prosecution Power Integrations cited neither the Martin patent nor the Wang and Habetler references, nor any similar art. In fact, during prosecution, Power Integrations cited only one reference to the Examiner, a promotional article touting Power Integrations' TinySwitch™ product.[2]

Failing to disclose (i) Martin, (ii) Wang, and (iii) Habetler, Power Integrations drafted, and was granted, a claim that reads on the circuits described in this prior art. In particular, Claim 1 of the '876 patent broadly claims the use of a counter (clocked by the oscillator) and digital to analog converter to change the control input of an oscillator to thereby change the frequency of the output signal of the oscillator. Claim 1 reads as follows:

> 1. A digital frequency jittering circuit for varying the switching frequency of a power supply, comprising:
>
> > an oscillator for generating a signal having a switching frequency, the oscillator having a control input for varying the switching frequency;
> >
> > a digital to analog converter coupled to the control input for varying the switching frequency; and
> >
> > a counter coupled to the output of the oscillator and to the digital to analog converter, the counter causing the digital to analog converter to adjust the control input and to vary the switching frequency.

Exh. E, '876 patent, Claim 1. As described briefly above, and in further detail below, each of these elements was disclosed in the Martin, Wang, and Habetler prior art references. Although Claim 1 did not include the ROM of any of Martin, Wang, and Habetler, that element simply was used to customize the variation of the switching frequency caused by the counter and digital to analog converter. As such, the ROM merely added an additional layer of complexity to the simple circuit described in Claim 1 of the '876 patent.

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[2] Exh. F, Ashok Bindra, "Power-Conversion Chip Cuts Energy Wastage in Off-Line Switchers," *Electronic Design*, pp. 46, 48, Oct. 1998.

III. ARGUMENT.

A. Summary Judgment Is Appropriate Since There Is No Dispute Of Material Fact.

Summary judgment is as appropriate in a patent case as in any other case. *See, e.g., SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1116 (Fed. Cir. 1985). Summary judgment is proper when "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c); *see also Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986). A "genuine" issue of material fact exists only when there is sufficient evidence such that a reasonable juror could find for the party opposing the motion. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 251-52 (1986).

Summary judgment of invalidity of Claim 1 of the '876 patent under 35 U.S.C. § 102 is proper because no reasonable jury could find that the claim is not anticipated by the prior art presented by Fairchild. *See Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1327 (Fed. Cir. 2001) (affirming grant of summary judgment of invalidity). Power Integrations is not entitled to Claim 1 if "the invention was patented or described in a printed publication in this or a foreign country, more than one year prior to the date of the application for patent in the United States." *See* 35 U.S.C. § 102. To anticipate under § 102(b), a prior art reference must disclose every limitation either explicitly or inherently. *Id.* Fairchild has presented three prior art references (one patent, and two technical papers), each of which predate the '876 patent by many years, and each of which explicitly disclose every limitation of Claim 1 of the '876 patent.

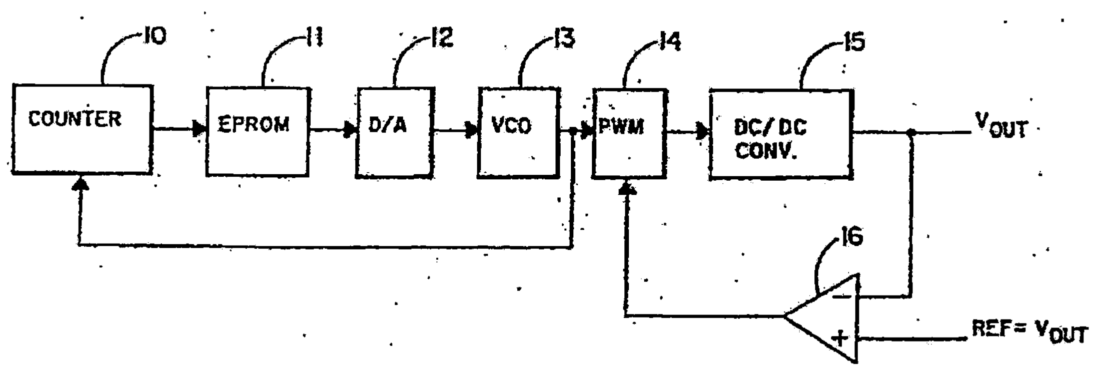
This clear and convincing evidence readily overcomes the presumption of validity that attaches to issued patents. *Univ. of Rochester v. G.D. Searle & Co.*, 358 F.3d 916, 920 (Fed. Cir. 2004) (upholding the finding of clear and convincing evidence of a patent's invalidity on summary judgment). Power Integrations cannot dispute the existence nor content of the prior art, which on their face invalidate Claim 1 of the '876 patent. Accordingly, Power Integrations will be unable to meet its burden of establishing a genuine issues of material fact regarding invalidity of Claim 1 and Fairchild is entitled to summary judgment that Claim 1 is invalid.

B. Claim 1 Of The '876 Patent Is Anticipated By The Martin Patent.

United States Patent No. 4,638,417 (the "Martin patent") fully anticipates Claim 1 of the '876 patent. To begin, the purpose and subject matter of the Martin patent is identical to that of the '876 patent: both claim circuits aimed at reducing electromagnetic interference (EMI) in a power supply by varying the frequency of the power converter. Exh. A, Martin patent, 1:66-68. Moreover, the circuit described in the Martin patent expressly discloses each of the elements of Claim 1 of the '876 patent.

1. Martin Expressly Discloses Each Element Of Claim 1.

The Martin circuit is illustrated in the sole figure of the Martin patent as follows:



The first element of Claim 1 is "an oscillator for generating a signal having a switching frequency, the oscillator having a control input for varying the switching frequency." Exh. E, '876 patent, Claim 1. The Martin circuit includes an oscillator shown as box 13, "VCO," in the figure where VCO stands for "voltage-controlled oscillator." As described in the specification, VCO 13 generates a signal with a switching frequency that varies according to a control input as required by the claim limitation. Exh. A, Martin patent, 2:46-49 ("This analog signal is then applied to VCO 13 which produces an oscillating signal which has a frequency which is representative of the amplitude of the analog signal."); 2:39-40 ("the output signal produced by VCO 13 varies in frequency"). As the amplitude of the analog signal applied to the control input of VCO 13 changes, so does the frequency of the signal generated by the oscillator.

The second element of Claim 1 is "a digital to analog converter coupled to the control input for varying the switching frequency." Exh. E, '876 patent, Claim 1. The Martin circuit

also includes a digital to analog converter, shown in the figure as box 12, "D/A" ("digital-to-analog converter 12"). *See* Exh. A, Martin patent, 2:34-35. As described in the specification and illustrated in the figure, D/A converter 12 is connected directly to the control input of the oscillator. *Id.* at 2:35-49 ("The D/A converter 12 supplies an analog signal to the VCO 13). The analog signal is used to vary the switching frequency of the signal generated by the oscillator in the manner described in the preceding paragraph.

The third element of Claim 1 is "a counter coupled to the output of the oscillator and to the digital to analog converter, the counter causing the digital to analog converter to adjust the control input and to vary the switching frequency." Exh. E, '876 patent, Claim 1. The Martin circuit includes a COUNTER 10. As shown in the above figure, the output of VCO 13 is directly connected to COUNTER 10. COUNTER 10 is also coupled to D/A converter 12 through EPROM 11. The Martin patent describes how COUNTER 10 causes D/A converter 12 to adjust the control input to the oscillator and to vary the switching frequency of the oscillator:

> Thus, as the output signal produced by VCO 13 varies in frequency, the counter 10 is caused to count at different rates. With counter 10 counting at different rates the EPROM 11 is stepped or addressed at different rates. The content of the PROM are… a pseudo random code in digital form. The digital signal from the PROM 11 is converted to an analog signal by D/A converter 12. This analog signal is then applied to VCO 13 which produces an oscillating signal which has a frequency which is representative of the amplitude of the analog signal.

Exh. A, Martin patent, 2:39-49.

Because each of the three elements of Claim 1 of the '876 patent are expressly disclosed in the Martin patent, it anticipates Claim 1.[3]

2. **The EPROM Element Does Not Prevent The Martin Patent From Anticipating Claim 1.**

Power Integrations does not dispute that the Martin patent discloses the oscillator, digital to analog converter and counter of Claim 1. Rather, Power Integrations merely argues that

[3] The preamble of Claim 1 of the '876 patent does not serve as a limitation. If the preamble were construed to be a limitation, however, that limitation would be met by the Martin patent. The preamble of Claim 1 reads as follows: "A digital frequency jittering circuit for varying the switching frequency of a power supply, comprising…." Exh. E, '876 patent, Claim 1. The Martin patent describes and claims "a circuit which reduces electromagnetic interference (EMI) by frequency modulation of power converters." Exh. A, '417 Patent, 1:66-68. As described above, this circuit varies the switching frequency of the power supply.

COUNTER 10 of the Martin patent is not "coupled" to D/A converter 12 because there is an EPROM between those two elements.[4] This is insufficient to raise a genuine issue of material fact. To begin, Power Integrations admits that the term "coupled" does not require a direct connection between two components. Moreover, as a matter of law, the inclusion of additional elements in a prior art reference is irrelevant to invalidity. No reasonable trier of fact could conclude that the earlier disclosure by Martin, which contains all of the elements of Claim 1, does not anticipate Claim 1 simply because it includes an additional feature.

a. <u>Under Either Construction Of "Coupled," The Martin Patent Anticipates Claim 1 Of The '876 Patent.</u>

To the extent that Power Integrations attempts to argue that there is a dispute as to the construction of "coupled," any such issue should be resolved by the Court on summary judgment. *See Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996) ("claim construction is a question of law to be decided by the Court"); *Southwall Tech., Inc. v. Cardinal IG Co.*, 54 F.3d 1578, 1576 (Fed. Cir. 1995) ("Claim interpretation, as a question of pure law, is amenable to summary judgment and disagreement over the meaning of a term within a claim does not necessarily create a genuine issue of material fact.") In any event, any such argument is a red herring, as Martin anticipates Claim 1 under both constructions.

Fairchild's proposed construction of "coupled" simply requires configuration of the coupled components in a manner that allows signals to pass from one to the other. It cannot be disputed that COUNTER 10 passes signals to EPROM 11 which cause the EPROM 11 in turn to select and pass particular signals to D/A converter 12. COUNTER 10 is thus "coupled" to D/A converter 12 through EPROM 11.

Power Integrations agrees that "coupled" does not require a direct connection between the components and that signals must be passed between the components. Exh. D, Claim Construction Transcript, pp. 12-13. Power Integrations, however, adds additional requirements

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[4] The Martin patent describes and claims a ROM and, as a preferred embodiment, a type of ROM called an EPROM. "ROM" stands for "read-only memory." Exh. G, The IEEE Standard Dictionary of Electrical and Electronics Term, Sixth Edition, p. 933, 877-78. "EPROM" stands for "erasable programmable read-only memory." *Id.*, at p. 363, 368.

that specific signals (i.e., "voltage, current or control signals") must be passed in order for the components to be coupled, and that the counter must control the digital to analog converter.[5] Even if the Court adopts Power Integrations' additional limitations, which are not supported by the claims, the specification or the file history, the Martin patent still anticipates Claim 1.

As described in the specification of the Martin patent, as COUNTER 10 is incremented it provides signals to EPROM 11, which uses those signals to look up digital signals stored at addresses in the EPROM which are identified by the counter signals. The signals stored in the EPROM at the particular addresses identified by the counter signals are then passed to the digital to analog converter, which converts the digital signal to an analog form and provides it to the control input of the oscillator:

> Consequently, when counter 10 produces an output signal, it selectively steps the PROM [11] (or ROM) through its addressing routine in order to select the contents of a particular address. The contents of PROM 11 are stored in digital form. These digital signals are supplied to the digital-to-analog converter 12 [which] supplies an analog signal to the VCO 13.

Exh. A, '417 Patent, 2:29-36. In this manner, COUNTER 10 controls D/A converter 12 and causes it to adjust the control input of oscillator VCO 13 and thus to vary the switching frequency of the oscillator, as required by Claim 1 of the '876 patent. Indeed, absent COUNTER 10, the EPROM would always supply the same value to D/A converter 12 and D/A converter 12 would not adjust the control input of the oscillator and the frequency of the output of the oscillator would not vary. Thus, it is clearly the counter of the Martin circuit that "causes" the digital to analog converter to adjust the control input to the oscillator.

b. <u>Power Integrations Cannot Avoid Anticipation By Pointing To Additional Elements In The Prior Art Or By Arguing That The Art Teaches Away From The Claimed Invention.</u>

As described above, COUNTER 10 of the Martin patent, not the EPROM, causes D/A converter 12 to adjust the control input, and vary the switching frequency, of the oscillator. The EPROM merely serves to make the circuit disclosed in Martin more sophisticated than the circuit

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[5] Power Integrations attempted to clarify at the Markman hearing that its construction of "coupled" "requires the coupling elements to control one another" and that "the counter has to cause the digital to analog converter to adjust the control input". Exh. D, Claim Construction Hearing Transcript, p. 12-13.

claimed in the '876 patent by adding a layer of complexity to the ***manner*** in which the control input changes. As the counter increments, the EPROM functions as a lookup table using the signal provided by the counter to look up a signal stored in the EPROM[6]. Regardless of the presence or absence of the EPROM, the control input varies according to the counters output, in a known and fixed manner. The use of the EPROM included in the Martin circuit does not ***restrict*** the manner in which the control input could be varied.

There are absolutely no facts that would suggest that the patentee considered the absence of the EPROM to be an "improvement" over the circuit disclosed in the Martin patent. Importantly, the '876 specification offers no advantages in omitting the EPROM element from the circuit, and in fact never refers to the use of an EPROM.

Moreover, as a matter of law, Power Integrations cannot argue that Martin fails to anticipate merely because Martin includes "an improvement." It is well settled that "[a]n improvement upon a patented device does not necessarily avoid infringement." *Stiftung v. Renishaw PLC*, 945 F.2d 1173, 1179 (Fed. Cir. 1991). For the same reason, a prior art reference that contains an improvement will not fail to anticipate. "[I]t is axiomatic that that which would literally infringe if later anticipates if earlier." *Bristol-Myers Squibb Co. v. Ben Venue Labs.*, 246 F.3d 1368, 1378 (Fed. Cir. 2001).

For example, in *Upsher-Smith Labs. v. Pamlab, L.L.C.*, on facts similar to those here, the Federal Circuit held that the prior art reference anticipated the asserted patent even though it did not expressly teach to exclude an element excluded in the asserted patent:

> Thus, because compositions made according to the [prior art reference] that do not contain antioxidants would infringe the asserted claims of the '624 and '646 patents, those compositions anticipate the asserted claims ***despite no express teaching to exclude the antioxidants in the [prior art reference]***. Consequently, Pamlab presented a prima facie case of anticipation, and the district court properly placed the burden on Upsher-Smith to present rebuttal evidence sufficient to raise a genuine issue of material fact of no anticipation by the [prior art reference].

412 F.3d 1319, 1322-1323 (Fed. Cir. 2005). In upholding a finding of anticipation, *Upsher-*

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[6] The EPROM has a one-to-one correspondence from input to output. Every time the EPROM element receives a given input value, it will produce a the same given output value. Thus, it results in a known and fixed – not random – frequency variation

Smith Labs. relied upon the century-old axiom of patent law, that a reference "which would literally infringe if later in time anticipates if earlier." *Id.*, at 1322 (citations omitted). That same axiom applies here. Since the Martin patent contains all three elements of Claim 1, it would infringe if later in time. As it was published a full eleven years before the '876 patent application, it anticipates.

It is also wrong, as a matter of law, for Power Integrations to argue that the Martin patent cannot anticipate Claim 1 of the '876 patent because it purportedly "teaches away" from the claimed invention. Whether Martin teaches away from the '876 invention is totally irrelevant to whether it anticipates and renders Claim 1 invalid. The Federal Circuit has repeatedly held that "[a] reference is no less anticipatory if, after disclosing the invention, the reference then disparages it. Thus, the question whether a reference 'teaches away' from the invention is inapplicable to an anticipation analysis." *Bristol-Myers Squibb Co. v. Ben Venue Labs.*, 246 F.3d 1368, 1378 (Fed. Cir. 2001) (quoting *Celeritas Techs., Ltd. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998)).

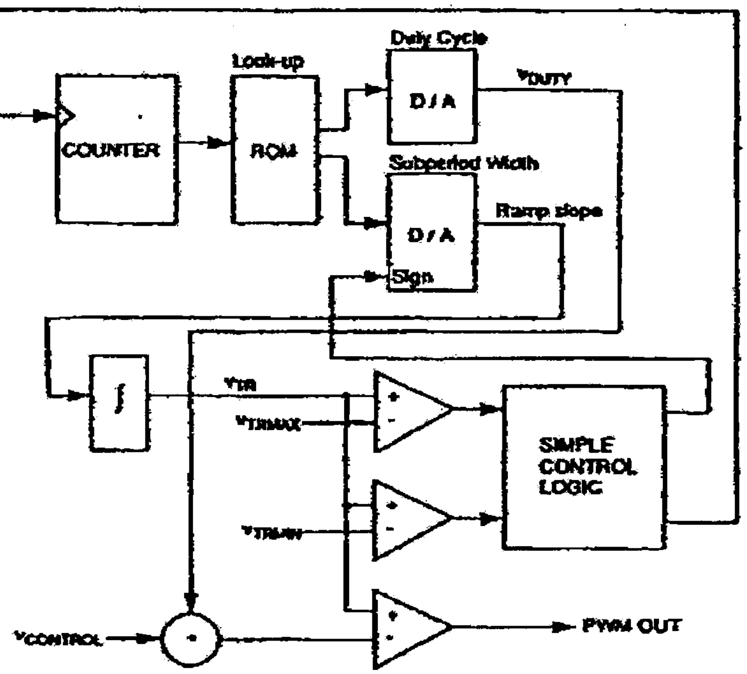
C. <u>Claim 1 Of The '876 Patent Is Anticipated By The Wang Reference.</u>

An article by Wang and Sanders, entitled "Programmed Pulsewidth Modulated Waveforms for Electromagnetic Interference Mitigation in DC-DC Converters", *IEEE Transactions on Power Electronics*, Vol. 8, No. 4, October 1993 (the "Wang reference") also discloses a circuit for reducing the EMI of a power converter by varying the switching frequency of the device:

> In this paper, a method to generate an optimal programmed switching waveform for a dc-dc converter is presented. This switching waveform is optimized to reduce the amplitude of harmonic peaks in the EMI generated by the converter.
>
> . . .
>
> The main approaches considered in this paper rely on the fact that it is possible to operate a PWM type power circuit with a time-varying switching frequency provided the average duty cycle is not disturbed. We employ a programmed waveform that repeats itself after *K* cycles. A typical programmed PWM waveform and its spectrum is illustrated in Fig. 1(b). Compared to regular PWM, the programmed PWM has a harmonic spacing that is smaller by a factor of *K*. The extra available harmonic frequencies are used to spread out the spectral energy of a given circuit waveform.

Exh. B, p. 596.

Power Integrations does not dispute that the Wang reference includes each element of claim 1: an oscillator, a digital to analog converter, and a counter:



Power Integrations does not dispute that the circuit shown in Figure 20 includes an oscillator for generating a signal having a switching frequency ("PWM OUT") and having a control input ("Ramp slope") for varying the switching frequency. The Wang reference describes the oscillator element (referred to as a waveform generator) in detail:

> A full implementation of the programmed waveform generator with a continuous control input can be based on a programmable triangle waveform generator. Two numbers are stored for every subperiod. One controls the slope of the triangle waveform, and therefore, the length of the subperiod. The other is added to the control signal, and therefore changes the duty ratio of a given subperiod from the average. The important waveforms and the resulting programmed PWM output are shown in Fig. 19. A block diagram implementation is shown in Fig. 20.

Exh. B, Wang reference, p. 603-04.

Power Integrations also does not dispute that Figure 20 of the Wang reference shows a digital to analog converter ("D/A, subperiod width") coupled to the control input ("Ramp slope") for varying the switching frequency. Nor does Power Integrations dispute that Figure 20 shows a counter coupled to the output of the oscillator.

Rather, Power Integrations attempts to distinguish the Wang reference using the same flawed basis that it attempted to use to distinguish the Martin patent – i.e., that the counter and the digital to analog converter are not "coupled" because the disclosed circuit includes a ROM between those two components. This argument must fail for the reasons described above with respect to the Martin patent. As in the circuit disclosed in Martin, the ROM of the Wang circuit functions as a lookup table to add a degree of randomness to the variation of the control input provided by the counter. Exh. B, p. 604. Again it is the counter that enables the selection of different signals stored in the ROM and thus that causes the digital to analog converter to adjust the control input and vary the switching frequency.

Since the Wang reference expressly discloses each element of Claim 1 of the '876 patent, it anticipates the claim and Fairchild is entitled to summary judgment for this basis as well.[7]

D. <u>Claim 1 Of The '876 Patent Is Anticipated By The Habetler Reference.</u>

A third prior art circuit for reducing EMI in a power converter is described in an article by Thomas G. Habetler entitled "Acoustic Noise Reduction in Sinusoidal PWM Drives Using a Randomly Modulated Carrier," IEEE Transactions on Power Electronics, Vol. 6, NO. 3, July 1991, p. 356 (the "Habetler reference"), attached as Exhibit C:

> Acoustic noise in an inverter-driven electric machine can be reduced by avoiding the concentration of harmonic energy in distinct tones. One method to spread out the harmonic spectrum without the use of programmed PWM is to cause the switching pattern to be random. It is proposed that the switching pattern can be randomized by modulating the triangle carrier in sinusoidal PWM with band-limited white noise.
>
> * * *
>
> It is proposed that an effective method of spreading the spectral content of the applied voltage is by randomly modulating the triangle carrier in sinusoidal PWM. In this way, the energy in the tones around the switching frequency is spread out with subsequent reduction in peak values. The random modulator maintains the advantages of sinusoidal PWM including constant average switching frequency, linear amplification, and real-time control. The instantaneous switching frequency variation is small and can be predetermined.

Id., pp. 356, 361-62.

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[7] If the preamble of Claim 1 is construed to be a limitation, that limitation is met by the Wang reference, which describes a circuit for varying the switching frequency of a power converter.

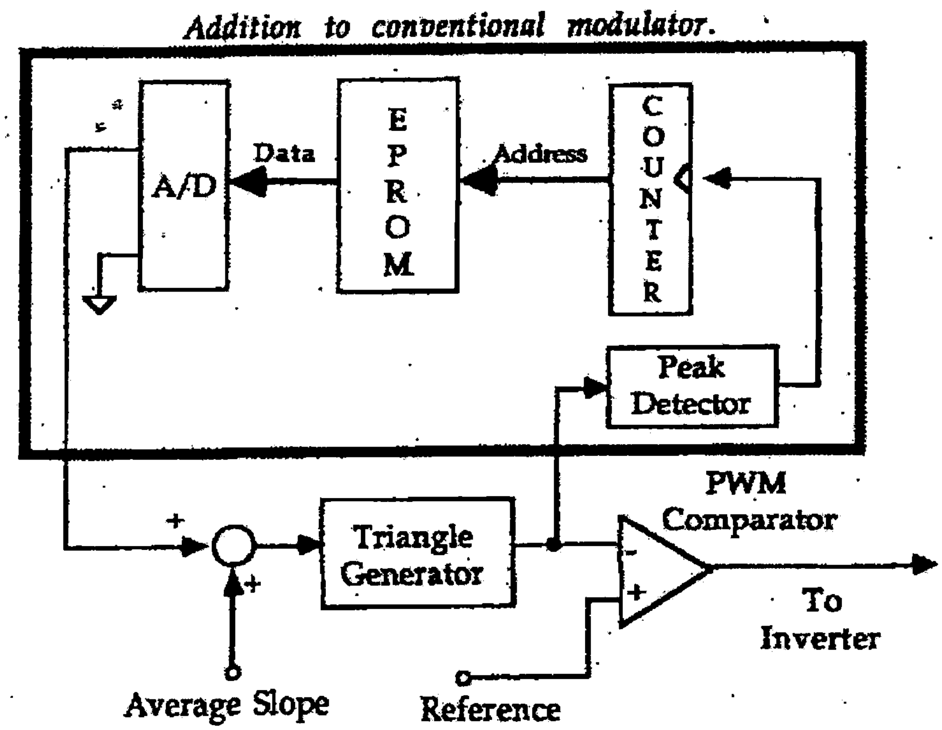

Fig. 5. Block diagram illustrating implementation of random carrier sinusoidal PWM regulator where noise source is generated digitally and stored in look-up table.

As with the two pieces of prior art discussed above, Power Integrations does not dispute that the circuit described in the Habetler reference includes the oscillator, digital to analog converter, and counter of Claim 1 of the '876 patent. Indeed, Figure 5 of Habetler shows an oscillator (labeled "Triangle Generator" in the figure) with a control input for generating a signal having a switching frequency. It also shows a digital to analog converter (labeled "A/D" because the signals are drawn moving right to left in the figure rather than left to right) coupled to the control input for varying the switching frequency by varying the slope of the triangle wave. Exh. C, Habetler reference, p. 359 ("[t]he output of the ROM is then sent through a digital to analog converter to get the slope of the triangle wave.") Figure 5 also shows a counter coupled to the output of the Triangle Generator[8] and to the digital to analog converter, the counter

[8] Figure 5 shows that the Triangle Generator is coupled to the counter through the Peak Detector. Power Integrations has not argued that the fact that the Peak Detector is between the Triangle Generator and Counter prevents the Counter from being "coupled" to the Triangle Generator. Nor could it, because signals are passed through the Peak Detector to the Counter.

causing the digital to analog converter to adjust the control input and to vary the switching frequency. As discussed above, Power Integrations argument that the EPROM decouples the counter from the digital to analog converter should be rejected. The Habetler reference expressly discloses each element of Claim 1 of the '876 patent and thus fully anticipates the claim.[9]

IV. CONCLUSION.

For the foregoing reasons, Fairchild respectfully requests that the Court grant summary judgment in its favor on Power Integrations' claim of infringement of Claim 1 of the '876 patent.

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Dated: March 17, 2006
167766.1

[9] If the preamble of Claim 1 is construed to be a limitation, that limitation is met by the Habetler reference, which describes a circuit for varying the switching frequency of a power converter.

CERTIFICATE OF SERVICE

I hereby certify that on the 24th day of March, 2006, the attached **REDACTED PUBLIC VERSION OF OPENING BRIEF IN SUPPORT OF DEFENDANTS' MOTION FOR SUMMARY JUDGMENT OF INVALIDITY OF CLAIM 1 OF THE '876 PATENT** was served upon the below-named counsel of record at the address and in the manner indicated:

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